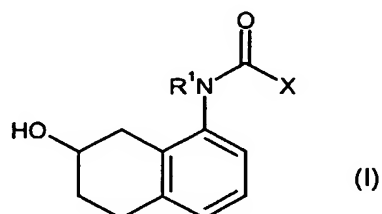


Claims

1. A tetrahydro-naphthalene derivative of the formula (I), its tautomeric or stereoisomeric form, or a salt thereof:



wherein

10  $R^1$  represents hydrogen or  $C_{1-6}$  alkyl;

$X$  represents  $-N(H)Y^1$ ,  $-N(H)-C_{1-6}$  alkylene $Y^1$ , biphenyl or  $C_{1-6}$  alkyl substituted by biphenyl;

wherein

15 said biphenyl is substituted by  $Z^1$ ,  $Z^2$  and  $Z^3$ ;

$Y^1$  represents biphenyl substituted by  $Z^3$ ,  $Z^4$  and  $Z^5$ ;

20  $Z^1$  and  $Z^2$  are identical or different and represent hydrogen, halogen, carboxy, nitro,  $C_{1-6}$  alkyl optionally substituted by cyano or mono-, di-, or tri- halogen,  $C_{1-6}$  alkoxy optionally substituted by morpholino, or mono-, di-, or tri- halogen,  $C_{1-6}$  alkylthio, amino,  $C_{1-6}$  alkylamino, di( $C_{1-6}$  alkyl)amino,  $C_{1-6}$  alkylsulfinyl,  $C_{1-6}$  alkanoyl, or

25  $C_{1-6}$  alkoxycarbonyl;

5

$Z^3$  represents hydrogen, halogen, amino, pyrrolidinyl, piperidino, piperazinyl, homopiperidino,  $C_{1-6}$  alkoxy optionally substituted by mono-, di-, or tri- halogen, or  $C_{1-6}$  alkyl optionally substituted by mono-, di-, or tri-halogen;

10

$Z^4$  represents halogen, carboxy, nitro,  $C_{1-6}$  alkyl optionally substituted by cyano or mono-, di-, or tri- halogen,  $C_{1-6}$  alkoxy optionally substituted by morpholino, or mono-, di-, or tri- halogen,  $C_{1-6}$  alkylthio, amino,  $C_{1-6}$  alkyl-amino, di( $C_{1-6}$  alkyl)amino,  $C_{1-6}$  alkylsulfinyl,  $C_{1-6}$  alkanoyl, or  $C_{1-6}$  alkoxycarbonyl; and

15

$Z^5$  represents hydrogen, halogen, carboxy, nitro,  $C_{1-6}$  alkyl optionally substituted by cyano or mono-, di-, or tri-halogen,  $C_{1-6}$  alkoxy optionally substituted by morpholino, or mono-, di-, or tri- halogen,  $C_{1-6}$  alkylthio, amino,  $C_{1-6}$  alkylamino, di( $C_{1-6}$  alkyl)amino,  $C_{1-6}$  alkylsulfinyl,  $C_{1-6}$  alkanoyl, or  $C_{1-6}$  alkoxycarbonyl;

20

or

25

$Z^4$  and  $Z^5$  together with the carbon atom to which they are attached, form a benzene ring.

2. The tetrahydro-naphthalene derivative of the formula (I), its tautomeric or stereoisomeric form, or a salt thereof as claimed in claim 1,

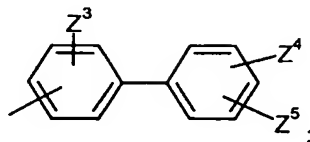
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wherein

$R^1$  represents hydrogen;

X represents -N(H)Y<sup>1</sup> or -N(H)-C<sub>1-6</sub> alkyleneY<sup>1</sup>;

Y<sup>1</sup> represents



Z<sup>3</sup> represents hydrogen, fluoro, chloro, bromo, amino, pyrrolidinyl, piperidino, piperazinyl, homopiperidino, C<sub>1-6</sub> alkoxy optionally substituted by cyano or mono-, di-, or tri- halogen, or C<sub>1-6</sub> alkyl optionally substituted by cyano or mono-, di-, or tri- halogen;

Z<sup>4</sup> represents halogen, carboxy, nitro, C<sub>1-6</sub> alkyl optionally substituted by cyano or mono-, di-, or tri- halogen, C<sub>1-6</sub> alkoxy optionally substituted by morpholino, or mono-, di-, or tri- halogen, C<sub>1-6</sub> alkylthio, amino, C<sub>1-6</sub> alkyl-amino, di(C<sub>1-6</sub> alkyl)amino, C<sub>1-6</sub> alkylsulfinyl, C<sub>1-6</sub> alkanoyl, or C<sub>1-6</sub> alkoxycarbonyl; and

Z<sup>5</sup> represents hydrogen, halogen, carboxy, nitro, C<sub>1-6</sub> alkyl optionally substituted by cyano or mono-, di-, or tri- halogen, C<sub>1-6</sub> alkoxy optionally substituted by morpholino, or mono-, di-, or tri- halogen, C<sub>1-6</sub> alkylthio, amino, C<sub>1-6</sub> alkylamino, di(C<sub>1-6</sub> alkyl)amino, C<sub>1-6</sub> alkylsulfinyl, C<sub>1-6</sub> alkanoyl, or C<sub>1-6</sub> alkoxycarbonyl.

3. The tetrahydro-naphthalene derivative of the formula (I), its tautomeric or stereoisomeric form, or a salt thereof as claimed in claim 1,

wherein

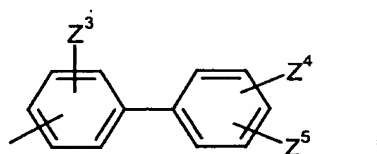
R<sup>1</sup> represents hydrogen;

5

X represents -N(H)Y<sup>1</sup> or -N(H)-C<sub>1-6</sub> alkyleneY<sup>1</sup>;

Y<sup>1</sup> represents

10



Z<sup>3</sup> represents hydrogen or piperidino;

15

Z<sup>4</sup> represents fluoro, chloro, bromo, carboxy, nitro, C<sub>1-6</sub> alkyl optionally substituted by mono-, di-, or tri-halogen, C<sub>1-6</sub> alkoxy optionally substituted by morpholino, or mono-, di-, or tri-halogen, C<sub>1-6</sub> alkylthio, di(C<sub>1-6</sub> alkyl)amino, C<sub>1-6</sub> alkylsulfinyl, C<sub>1-6</sub> alkanoyl, or C<sub>1-6</sub> alkoxy carbonyl; and

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Z<sup>5</sup> represents hydrogen, fluoro, chloro, bromo, C<sub>1-6</sub> alkoxy, C<sub>1-6</sub> alkylthio or C<sub>1-6</sub> alkyl optionally substituted by cyano or mono-, di-, or tri-halogen.

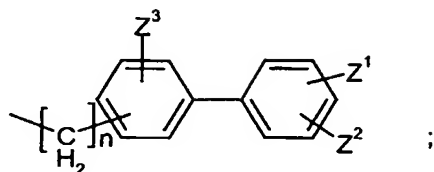
- 25      4.      The tetrahydro-naphthalene derivative of the formula (I), its tautomeric or stereoisomeric form, or a salt thereof as claimed in claim 1,

wherein

$R^1$  represents hydrogen;

X represents

5



n represents an integer selected from 0 to 6;

10

$Z^1$  and  $Z^2$  are identical or different and represent hydrogen, fluoro, chloro, bromo, carboxy, -nitro,  $C_{1-6}$  alkyl optionally substituted by mono-, di-, or tri- halogen,  $C_{1-6}$  alkoxy optionally substituted by morpholino, or mono-, di-, or tri- halogen,  $C_{1-6}$  alkylthio, di( $C_{1-6}$  alkyl)amino,  $C_{1-6}$  alkylsulfinyl,  $C_{1-6}$  alkanoyl, or  $C_{1-6}$  alkoxycarbonyl; and

15

$Z^3$  represents hydrogen, fluoro, chloro, bromo, amino, piperidino,  $C_{1-6}$  alkoxy optionally substituted by mono-, di-, or tri- halogen, or  $C_{1-6}$  alkyl optionally substituted by cyano or mono-, di-, or tri- halogen.

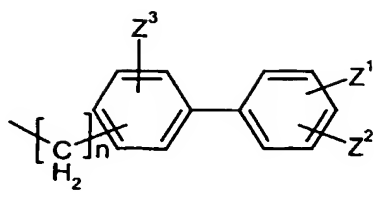
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5. The tetrahydro-naphthalene derivative of the formula (I), its tautomeric or stereoisomeric form, or a salt thereof as claimed in claim 1, wherein

25

$R^1$  represents hydrogen;

X represents



5 n represents an integer of 0 or 1;

10  $Z^1$  represents hydrogen, fluoro, chloro, bromo,  $C_{1-6}$ alkyl,  $C_{1-6}$  alkoxy, amino,  $C_{1-6}$  alkylamino, or di( $C_{1-6}$  alkyl)-amino;

$Z^2$  represents hydrogen, fluoro, chloro, bromo,  $C_{1-6}$  alkyl or  $C_{1-6}$  alkoxy; and

15  $Z^3$  represents hydrogen.

6. The tetrahydro-naphthalene derivative of the formula (I), its tautomeric or stereoisomeric form, or a salt thereof as claimed in claim 1, wherein said tetrahydro-naphthalene derivative of the formula (I) is selected from the group consisting of:

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N-(7-hydroxy-5,6,7,8-tetrahydronaphthalen-1-yl)-N'-[4'-(trifluoromethyl)-biphenyl-3-yl]urea;

N-(7-hydroxy-5,6,7,8-tetrahydronaphthalen-1-yl)-N'-[2'-(trifluoromethyl)-biphenyl-3-yl]urea;

25 N-(7-hydroxy-5,6,7,8-tetrahydronaphthalen-1-yl)-N'-[4'-(methylthio)biphenyl-3-yl]urea;

N-(2',3'-dichlorobiphenyl-3-yl)-N'-(7-hydroxy-5,6,7,8-tetrahydronaphthalen-1-yl)urea;

- N-(2',4'-dichlorobiphenyl-3-yl)-N'-(7-hydroxy-5,6,7,8-tetrahydronaphthalen-1-yl)urea;  
N-(4'-acetylbiphenyl-3-yl)-N'-(7-hydroxy-5,6,7,8-tetrahydronaphthalen-1-yl)-  
urea;  
5 N-[(2'-fluorobiphenyl-4-yl)methyl]-N'-(7-hydroxy-5,6,7,8-tetrahydronaphthalen-1-yl)urea;  
N-[(2'-fluorobiphenyl-4-yl)methyl]-N'-(7-hydroxy-5,6,7,8-tetrahydronaphthalen-1-yl)urea;  
N-[(2',6'-difluorobiphenyl-4-yl)methyl]-N'-(7-hydroxy-5,6,7,8-tetrahydro-  
10 naphthalen-1-yl)urea;  
N-[(2'-fluorobiphenyl-3-yl)methyl]-N'-(7-hydroxy-5,6,7,8-tetrahydro-naphthalen-1-yl)urea;  
N-(7-hydroxy-5,6,7,8-tetrahydronaphthalen-1-yl)-N'-[(4'-isopropylbiphenyl-3-yl)methyl]urea;  
15 N-[(2',4'-dichlorobiphenyl-3-yl)methyl]-N'-(7-hydroxy-5,6,7,8-tetrahydro-naphthalen-1-yl)urea.
7. A medicament comprising tetrahydro-naphthalene derivative of the formula (I), its tautomeric or stereoisomeric form, or a physiologically acceptable salt thereof as claimed in claim 1 in as an active ingredient.  
20
8. The medicament as claimed in claim 7, further comprising one or more pharmaceutically acceptable excipients.
- 25 9. The medicament as claimed in claim 7, wherein said tetrahydro-naphthalene derivative of the formula (I), its tautomeric or stereoisomeric form, or a physiologically acceptable salt thereof is a VR1 antagonist.
10. The medicament as claimed in claim 7 for the treatment and/or prevention of an urological disorder or disease.  
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11. The medicament as claimed in claim 10, wherein said urological disorder or disease is urge urinary incontinence or overactive bladder.
12. The medicament as claimed in claim 7 for the treatment and/or prevention of pain.
13. The medicament as claimed in claim 12, wherein said pain is chronic pain, neuropathic pain, postoperative pain, or rheumatoid arthritic pain.
14. The medicament as claimed in claim 7 for the treatment and/or prevention of a disorder or disease related to pain.
15. The medicament as claimed in claim 14, wherein said disorder or disease related to pain is neuralgia, neuropathies, algnesia, nerve injury, ischaemia, neurodegeneration, or stroke.
16. The medicament as claimed in claim 7 for the treatment and/or prevention of an inflammatory disorder or disease.
17. The medicament as claimed in claim 16, wherein said inflammatory disorder or disease is asthma or COPD.
18. Use of compounds according to claim 1 for manufacturing a medicament for the treatment and/or prevention of an urological disorder or disease.
19. Use of compounds according to claim 1 for manufacturing a medicament for the treatment and/or prevention of pain.
20. Use of compounds according to claim 1 for manufacturing a medicament for the treatment and/or prevention of an inflammatory disorder or disease.



21. Process for controlling an urological disorder or disease in humans and animals by administration of a VR1-antagonistically effective amount of at least one compound according to claim 1.
- 5 22. Process for controlling pain in humans and animals by administration of a VR1-antagonistically effective amount of at least one compound according to claim 1.
- 10 23. Process for controlling an inflammatory disorder or disease in humans and animals by administration of a VR1-antagonistically effective amount of at least one compound according to claim 1.